

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001918

A. CLASSIFICATION OF SUBJECT MATTER

IPC: C07K-7/06 A61K-31/436 C07K-1/00 C07K-5/04 A61K-38/04 A61L-31/08 A61L-31/16 A61P-37/00 C07D-498/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: C07K A61K A61L A61P C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)
Delphion, Pubmed, Caplus, Registry (Structure search)

Keywords: rapamycin, derivative, conjugate, amino acid, peptide, carbamate, cell cycle.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No(s).
X	US 5,411,967 A (AMERICAN HOME PRODUCTS CORPORATION, Madison, N.J.), 2 May, 1995. Whole Document.	1 to 6 and 14 to 18
A	EP 0509795 A2 (AMERICAN HOME PRODUCTS CORPORATION, New York, N.Y.) 21 October, 1992. Whole Document.	1 to 3 and 14 to 18
A	US 5,385,910 A (AMERICAN HOME PRODUCTS CORPORATION, Madison, N.J.), 31 January, 1995. Whole Document.	1 to 3 and 14 to 18

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"Z" document member of the same patent family

Date of the actual completion of the international search
07 February 2005 (07-02-2005)

Date of mailing of the international search report
14 March 2005 (14-03-2005)

Name and mailing address of the ISA/CA
Canadian Intellectual Property Office
Place du Portage I, C114 - 1st Floor, Box PCT
50 Victoria Street
Gatineau, Quebec K1A 0C9

Authorized officer
Nathalie Chartrand (819) 994-2341

Facsimile No: 001(819)953-2476

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001918

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No(s).
A	WO 96/41807 A1 (SANDOZ-ERFINDUNGEN VERWALTUNGSGESELLSCHAFT MBH [AT/AT]), 27 December, 1996. Whole Document.	1 to 9 and 14 to 18
Y	WO 03/057218 A1 (NOVARTIS AG [CH/CH]), 17 July, 2003. Whole Document.	7 to 13
Y	US 6,585,764 B2 (CORDIS CORPORATION, Miami Lakes, FL (US)), 1 July, 2003. Whole Document.	10 to 13

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001918

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of the first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

7. ☒ Claim Nos. : 4 to 9, 15 and 16
because they relate to subject matter not required to be searched by this Authority, namely :
- Although claims 4 to 9, 15 and 16 are methods of treatment of the human/animal body which this Authority is not obliged to search under Rule 39.1(iv) of the PCT, the search has been carried out based on the alleged effects of the compounds defined in claim 1.
8. ☐ Claim Nos. :
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
9. ☐ Claims Nos. :
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

10. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
11. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
12. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claim Nos. :
13. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim Nos. :

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001918

The structure of rapamycin seems to be erroneous in the application. The rapamycin ring system of the application comprises a superfluous carbon (located between the conjugated double bonds and a carbonyl group) compared to the rapamycin ring system found in the art. Since the crux of the invention resides in the substituents located at the 42 position of rapamycin and not in the ring system, the ring system of rapamycin commonly disclosed in the art was used as the basis for the search.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/001918

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US5411967	02-05-1995	AU679931 B2	17-07-1997
		AU4894293 A	28-04-1994
		BR1100836 A3	06-06-2000
		BR9304211 A	07-06-1994
		CA2108068 A1	14-04-1994
		CN1036591C C	03-12-1997
		EP0593227 A1	20-04-1994
		EP1266900 A1	18-12-2002
		FI106463B B1	15-02-2001
		GB9317596D D0	06-10-1993
		HU70199 A2	28-09-1995
		IL107190 A	30-09-1997
		JP6211870 A	02-08-1994
		MX9306271 A1	29-04-1994
		NZ248909 A	27-11-1995
		PH31253 A	18-06-1998
		RU2126409 C1	20-02-1999
		SG47580 A1	17-04-1998
		US5302584 A	12-04-1994
		US5411967 A	02-05-1995
		US5434260 A	18-07-1995
		US5480988 A	02-01-1996
		US5480989 A	02-01-1996
		US5484790 A	16-01-1996
		US5484791 A	16-01-1996
		US5486522 A	23-01-1996
		US5486523 A	23-01-1996
		US5486524 A	23-01-1996
		US5488054 A	30-01-1996
		US5489595 A	06-02-1996
		US5489680 A	06-02-1996
		US5504204 A	02-04-1996
		US5508399 A	16-04-1996
		US5516780 A	14-05-1996
		US5519031 A	21-05-1996
		US5530007 A	25-06-1996
		US5530121 A	25-06-1996
		US5532355 A	02-07-1996
		US5550133 A	27-08-1996
		US5559112 A	24-09-1996
		US5559119 A	24-09-1996
		US5559120 A	24-09-1996
		US5559227 A	24-09-1996
		US5567709 A	22-10-1996
		ZA9307515 A	11-04-1995
EP0509795	21-10-1992	AU642592 B2	21-10-1993
		AU1488092 A	22-10-1992
		CA2065790 A1	18-10-1992
		CA2065791 A1	19-08-1993
		GZ9201173 A3	15-09-1993
		EP0509795 A2	21-10-1992
		FI921595 A	18-10-1992
		HU9201254D D0	28-07-1992
		IE921249 A1	21-10-1992
		JP5112573 A	07-05-1993
		MX9201710 A1	01-01-1993
		NO921449 A	19-10-1992
		NZ242367 A	26-07-1994
		SK117392 A3	12-04-1995
		US5118678 A	02-06-1992
		US5194447 A	16-03-1993
		US5262424 A	16-11-1993
		ZA9202738 A	14-10-1993

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/001918

US5385910	31-01-1995	US5385910 A	31-01-1995
Fi			
WO9641807		AT228135T T	15-12-2002
		AU712193 B2	28-10-1999
		AU6300696 A	09-01-1997
		BR9609260 A	18-05-1999
		CA2219659 A1	27-12-1996
		CN1124276C C	15-10-2003
		CZ292233 B6	13-08-2003
		DE69624921D D1	02-01-2003
		DE69624921T T2	11-09-2003
		DK833828T T3	17-03-2003
		EP0833828 A1	08-04-1998
		ES2187660T T3	16-06-2003
		FI113051B B1	27-02-2004
		GB9511704D D0	02-08-1995
		GB9513754D D0	06-09-1995
		HK1014949 A1	09-07-2004
		HU9802200 A2	01-02-1999
		IL122212 A	26-08-2001
		JP3226545B2 B2	05-11-2001
		NO975432 A	26-11-1997
		NZ311647 A	29-11-1999
		PL184731B B1	31-12-2002
		PT833828T T	28-02-2003
		RU2158267 C2	27-10-2000
		SI833828T T1	30-06-2003
		SK168297 A3	06-05-1998
		TR9701567T T1	21-04-1998
		TW410226 B	01-11-2000
		US5985890 A	16-11-1999
		US6200985 B1	13-03-2001
		WO9641807 A1	27-12-1996
		ZA9604870 A	08-12-1997
WO03057218	17-07-2003	AU2003205586 A1	24-07-2003
		BR0306858 A	03-11-2004
		CA2472198 A1	17-07-2003
		EP1465624 A1	13-10-2004
		US2003170287 A1	11-09-2003
		US2005020614 A1	27-01-2005
		WO03057218 A1	17-07-2003
US6585764		AT263520T T	15-04-2004
		AU1129902 A	08-04-2002
		AU1132102 A	08-04-2002
		AU5977401 A	26-11-2001
		AU6157901 A	26-11-2001
		AU6158001 A	26-11-2001
		AU6158101 A	26-11-2001
		AU6295701 A	26-11-2001
		AU6311201 A	26-11-2001
		AU6311301 A	26-11-2001
		AU7730201 A	11-04-2002
		AU9316101 A	08-04-2002
		AU9486901 A	08-04-2002
		AU2003203791 A1	06-11-2003
		AU2003203891 A1	20-11-2003
		AU2003204276 A1	11-12-2003
		CA2269310 A1	16-10-1999
		CA2357881 A1	29-03-2002
		CA2408606 A1	22-11-2001
		CA2408608 A1	22-11-2001
		CA2408719 A1	22-11-2001
		CA2408729 A1	22-11-2001
		CA2408752 A1	22-11-2001
		CA2408754 A1	22-11-2001
		CA2408838 A1	22-11-2001

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/001918

CA2424029 A1	04-04-2002
CA2424038 A1	04-04-2002
CA2424049 A1	04-04-2002
CA2425753 A1	04-04-2002
CA2426332 A1	22-10-2003
CA2426974 A1	30-10-2003
CA2429059 A1	20-11-2003
CA2436342 A1	30-01-2004
CA2442327 A1	10-10-2002
CA2445654 A1	21-04-2004
CA2445655 A1	21-04-2004
CA2450962 A1	03-01-2003
CN1477980 T	25-02-2004
DE69916157D D1	13-05-2004
EP0950386 A2	20-10-1999
EP1192957 A2	03-04-2002
EP1280512 A2	05-02-2003
EP1280568 A1	05-02-2003
EP1280569 A1	05-02-2003
EP1280570 A2	05-02-2003
EP1280571 A1	05-02-2003
EP1280572 A1	05-02-2003
EP1289576 A1	12-03-2003
EP1322235 A1	02-07-2003
EP1322342 A1	02-07-2003
EP1322351 A1	02-07-2003
EP1335761 A1	20-08-2003
EP1356789 A1	29-10-2003
EP1360967 A1	12-11-2003
EP1362602 A1	19-11-2003
EP1364628 A1	26-11-2003
EP1372752 A1	02-01-2004
EP1386624 A1	04-02-2004
EP1406682 A1	14-04-2004
EP1407726 A1	14-04-2004
EP1413256 A1	28-04-2004
EP1421909 A1	26-05-2004
ES2218953 T T3	16-11-2004
JP2002238994 A	27-08-2002
JP2003334256 A	25-11-2003
JP2003533493 T T	11-11-2003
JP2003533494 T T	11-11-2003
JP2003533495 T T	11-11-2003
JP2003533496 T T	11-11-2003
JP2004000559 A	08-01-2004
JP2004000586 A	08-01-2004
JP2004130101 A	30-04-2004
JP2004141660 A	20-05-2004
JP2004154541 A	03-06-2004
JP2004275733 A	07-10-2004
JP2004501102 T T	15-01-2004
JP2004504078 T T	12-02-2004
JP2004516235 T T	03-06-2004
JP2004518458 T T	24-06-2004
JP2004521668 T T	22-07-2004
JP2004524868 T T	19-08-2004
JP2004524916 T T	19-08-2004
JP2004531331 T T	14-10-2004
PT950386 T	31-08-2004
US6273913 B1	14-08-2001
US6585764 B2	01-07-2003
US6746773 B2	08-06-2004
US6776796 B2	17-08-2004
US6788202 B2	07-09-2004
US6808536 B2	26-10-2004
US2001029351 A1	11-10-2001
US2002005208 A1	17-01-2002
US2002007213 A1	17-01-2002
US2002007214 A1	17-01-2002
US2002007215 A1	17-01-2002
US2002051730 A1	02-05-2002
US2002111590 A1	15-08-2002
US2002133183 A1	19-09-2002
US2002143386 A1	03-10-2002
US2002165608 A1	07-11-2002
US2002193867 A1	19-12-2002

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/001918

US2003060877 A1	27-03-2003
US2003065345 A1	03-04-2003
US2003065346 A1	03-04-2003
US2003065377 A1	03-04-2003
US2003204168 A1	30-10-2003
US2003216699 A1	20-11-2003
US2004102758 A1	27-05-2004
US2004197372 A1	07-10-2004
US2004243097 A1	02-12-2004
US2004260268 A1	23-12-2004
US2005002986 A1	06-01-2005
US2005004663 A1	06-01-2005
US2005033261 A1	10-02-2005
WO0187263 A2	22-11-2001
WO0187342 A2	22-11-2001
WO0187372 A1	22-11-2001
WO0187373 A1	22-11-2001
WO0187374 A1	22-11-2001
WO0187375 A1	22-11-2001